# **Report**

Throughout the course of this unit I have had the privileged to learn a lot of various forms of knowledge in regards to business programing in python. I have had a lot of take homes and perceived a multitude of topics as impactful as well as crucial to my understanding of coding however there is one that takes the cup and supersedes all the other topics both in significance and relevance and this topic is visualizations.

Visualizations was the most impactful topic for me, not only because it helped me unlock a deeper overall understanding of coding, but also because it is one of the main topics we had to use for our programing assignment. Learning more about Matplotlyib, Pandas and Seaborn specifically was crucial in helping me do the second programing assignment.

The activity that I would say was the most impactful, solely because it was centered around this topic was visualize twitter as its contribution toward my understanding of this topic was great in many ways. In visualize twitter we had to follow a workflow where we were supposed to Install Packages, Get data, Inspect and (optiopnally) clean the data, Formalise questions to answer and Visually perform analysis, in our case sentintment analysis. I feel like these tasks really helped me to get a much better understanding of this topic as it had a lot of emphasis on the practical aspect of this topic.

To cap it all off I think its safe to say that I have managed to grasp a greater understanding of python thanks to this module and that it has been an integral part of my python journey. I am happy to have learnt this amongst a lot of other modules and I hope to keep learning more about this language in the future.

# **Appendix**

#### Week 1 Journal Entry

In week 1 I had the opportunity to learn about coding and even though I don’t have a background in coding at all, I really feel like I understood a fair amount of what I was taught in class, making me a better programmer. I learnt about input and output devices, how computers interpret code and pseudocode.

I learn’t about how computers interpret code both during the workshop and the lecture for example Decimal to Binary and then to Ascii. I also did two exercises in the workshop that helped me understand pseudocode and binary language better, the first was the Sharpen Pencil exercise and the the second was the Code Magnets exercise. In one of the exercises I had to arrange sentences in a certain order in pseudocode fashion and in the other exercise we had to figure out the python language by interpreting certain commands in a list. The one that stood out to me the most though was the sharpen pencil exercise as it helped understand how to interpret and write code in a meaningful manner

Personally for me this week was an eye opening experience as it gave me a better understanding of how coding works, making me more confident in tackling the future material that his class has to offer

#### Week 2 Journal Entry

Week two has been a very enlightening week for me as I dove deeper into coding and understanding how exactly to code. I did some tutorial questions that I found really helpful, because I got a hands on feel on the coding process and how exactly it works. I also got a chance to get introduced to google colab and github some very useful platforms that I have never really used before.

For me the take home for this week was actually recaping and putting into practice some of the concepts I had learnt from week 1 aswell as afirming the new topics I learnt this week . Some areas of recap that can be noted are data structures, program structures and single values and some new concepts that I managed to take home with me are the various arithmetic operations that we learnt about during the class, which I noticed aren't really my strength as I was confused about some of the concepts and terms that I had learnt about. I am sure that with more diligence and practice, i will grasp these concepts in not time.

Lastly I learnt about the six operations in coding which are, Receive Information, Output Information, Perform Arithmetic, Assign a value to a variable, Compare to variables and Repeat a group of actions. In conclusion I can say that week 2 was fruitful and the exercises that I did in class really helped me understand the gist of coding.

#### Week 3 Journal Entry

**Overview**

In week three I learnt alot, I was confused about some of the concepts from the previous week because I felt like they were not explained properly however I tried me best understand them when we recped on them in week three. What really stood out to me this week though were the two different types of fucntions that exist in the coding world.

**Built In and User Define Fucntions**

Build in fucntions which are functions that are already found in the python library. These are functions that dont need to be created from scratch as and can be used by anyone who knows how to code in python. The next type of function that I learnt about were the user define functions. These are funcitons that are created from scratch in a specific way in order to achieve aspecific result.

I learnt that they need a header and a body in order for the user to be able to execute the code, and I learnt how exactly to write the conde so that I can one day make my own define function.

**Module Examples**

Another take home for me was learning more about modules, I learnt about seven different types of modules and I saw examples of these modules aswell. For someone who didnt even know what a module was, to learning about seven of them I think that was a really good take home for me.

#### Week 4 Journal

This week was abit tough for me as I had some trouble understanding the concepts. As the weeks go by Ive noticed that the coding is becoming more advanced and tougher to understand. However there were afew things that I managed to grasp from this weeks lessons.

Firstly we went over the six things that a computer can do which are input, output, calculate, store decide and repeat. I feel like I grasped these concepts much easier and better this time as I have abit of trouble understanding them when we first when ovee them. The next thing I managed to grasp were the core priciples of algorithms and encapsulation. I had some trouble understading what encapsulation really was however after abit of studying I managed to pick up that it is the process of wrapping similar code in one place.

Lastly I learnt abit more about python functions, built in ones to be specific. I learn that they can be limited most probabaly because things are always changing in the  coding/IT world which is why user define functions are neccessary.

#### Week 5 Journal

This week I got the opportunity to learn about modules. As a person who is new to programing I found it abit difficult to grasp the concepts that I learnt about, however after abit of practice and then recap afterwards I managed to understand this weeks concepts much more clearly. I learnt that moduler design is the process of dividing programs into seperate modules in order to help break down programs into smaller and more managable pieces.

Another take home for me was the my math coding sheet that I did in google collab. It helped me understand how basic arithmetic functions can be used in a module. I got a better understanding of the codes that we used in the google cllab sheet  as I noticed that this type of code is naive and as you can pass incomaptable function types such as intergers or stings that can cause a different expectation to b raised.

The final take home for me was the concept of appending paths, this is a concept I had never learn't about before however it can be noted that I now know that appending paths is pretty much the process of joining two or more path components together to make a complete path and the use of a path is to locate and access directories or files on a file system. These are the things that stood out to me on week 5.

#### Week 6 Journal

This week was pretty enlightening for me as I got the chance to learn about the importance of debugging and testing. I got clarification that you need to test the code first and then debug it afterwards in order to make sure that it works, I thought that it was the other way round atfirst, however I learnt that my thinking was wrong.

During the lectutre I got a chance to see how important this process is through afew videos that we watched of some planes that crashed due to the face that the codeing systems in those planes were not tested and debugged properly because the airline put itself under pressure to finish the construction of its new plane in order to beat its competition.

Lastly I learnt the difference betwen testing and debugging, testing is the process of running a program to find errors and bugs, while debugging is the process of finding and fixing those errors and bugs. These were the take homes for me.

#### Week 8 Journal Entry

My take homes form this weeks lecture were the use and understanding of html tags. We learnt how to create a webpage using notepad and how to modify out website by adding headers, body and a log in button. For me this was a huge eye opener as I have never done this before and didnt know that creating a website could be so simple.

Lastly I managed to understand what website scraping is, which is pretty much the process of extracting info from websites. I learnt that website scraping can be used to extract data from multiple websites and then compile it into a sigle database or to analyze  changes in a website over a period of time.

These were the two take homes for me this week and I hope to learn more.

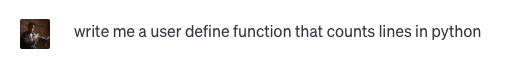
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## **Conversations With AI Tools**



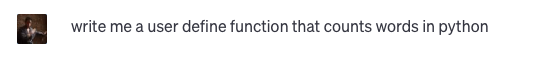


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